

IN THE CLAIMS

Please cancel Claims 22-26 and 32-37, without prejudice or disclaimer of subject matter.

Please amend Claims 1, 4, 9, 11-14, 16, 18, 20, 27-31 and 38, and add Claim 39, to read as follows.

1. (Currently Amended) A system comprising:

at least one device having a processor-controlled machine for causing at least one function specified by a user to be carried out and a control apparatus for enabling voice-control of the processor-controlled machine and a speech processing apparatus having means for receiving speech data representing speech by a user, a grammar store storing speech recognition grammars, speech recognition means for recognising speech in the received speech data using at least one of the speech recognition grammars, speech interpreting means for interpreting the recognised speech to provide instructions for controlling at least one function of a processor-controlled machine and transmitting means for transmitting the instructions to the control apparatus,

the control apparatus being arranged to couple the processor-controlled machine to the speech processing apparatus and having means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognising speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the grammar store comprises at least first and second grammars having grammar rules and at least one interface grammar defining an interface of grammar rules and not including the content of the grammar rules, the first grammar

being arranged to ~~use~~ include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to ~~implement~~ specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing means is arranged to provide instructions for causing the second grammar to be ~~linked to~~ combined with the first grammar ~~using~~ based on the interface grammar.

2. (Original) A system according to claim 1, wherein the control apparatus comprises a JAVA virtual machine.

3. (Original) A system according to claim 1, wherein the processor-controlled machine of said at least one device is arranged to carried out said at least one function.

4. (Currently Amended) A system according to claim 3, wherein the processor-controlled machine is selected from the group consisting of:

a photocopier, a facsimile machine, a multi-function machine, a television, a video cassette recorder, a microwave oven, a heating system, and a lighting system.

5. (Original) A system according to claim 1, wherein the processor-controlled machine of said at least one device is arranged to cause another device coupled to the network to carry out the at least one function.

6. (Original) A system according to claim 5, comprising as said other device a device comprising a processor-controlled machine and a control apparatus.

7. (Original) A system according to claim 5, wherein the at least one device comprises a digital camera and said other device comprises a printer.

8. (Original) A system according to claim 7, wherein the first grammar comprises a camera grammar and the second grammar comprises a printer grammar.

9. (Currently Amended) A system according to claim 1, wherein the control apparatus comprises receiving means for receiving instructions derived from speech recognised by the speech recognition means; and

dialog communication means for communicating with the user to provide information to the user in response to instructions received by said receiving means thereby enabling a dialog with the user, wherein the dialog communication means has a number of different dialog states and is arranged to change dialog states in response to instructions ~~receiving~~ received by the receiving means, the control apparatus being arranged to supply to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state of the dialog communication means such that, in at least one dialog state, the control apparatus is arranged to provide instructions to cause said first and second grammars to be ~~linked by~~ combined, based on said interface grammar.

10. (Original) A system according to claim 1, wherein the control apparatus is arranged to couple the processor-controlled machine to the speech processing apparatus via a network.

11. (Currently Amended) A speech processing apparatus for receiving speech data representing commands spoken by a user for controlling a function of a device, the speech processing apparatus ~~having~~ comprising:

receiving means for receiving speech data representing speech by a user;

a grammar store storing speech recognition grammars;

speech recognition means for recognising speech in the received speech data using at least one of the speech recognition grammars;

speech interpreting means for interpreting recognised speech to provide instructions for enabling a function of a device to be controlled; and

transmitting means for transmitting the instructions to a device for enabling control of a function of that device, wherein the grammar store comprises at least first and second grammars having grammar rules and at least one interface grammar defining an interface of grammar rules ~~and not including the content of the grammar rules~~, the first grammar being arranged to ~~use~~ include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to ~~implement~~ specify grammar rules according to the interface defined by the interface grammar such that the second grammar can be ~~linked to~~ combined with the first grammar ~~using~~ based on the interface grammar to form an extended grammar.

12. (Currently Amended) A speech processing apparatus according to claim 11, wherein the first and second grammars comprise[[s]] camera and printer grammars, respectively.

13. (Currently Amended) A control apparatus for coupling a processor-controlled machine to a speech processing apparatus for enabling a user to control a function of a machine by spoken commands, the control apparatus ~~having~~ comprising: means for providing speech recognition grammar instructions defining a speech recognition grammar or grammars to be used by the speech processing apparatus means for recognising speech data; and means for transmitting to the speech processing apparatus the speech recognition grammar instructions for speech data representing words spoken by a user, the speech recognition grammar instructions providing means being arranged to provide instructions for causing first and second grammars to be ~~linked by~~ combined, based on an interface grammar ~~having~~ defining an interface of grammar rules ~~usable by~~ and not including the content of the grammar rules, the first grammar being arranged to include the interface of the grammar rules defined by the interface grammar and ~~implementable by~~ the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, so as to form an extended grammar.

14. (Currently Amended) A control apparatus for enabling coupling of a processor-controlled machine to a speech processing apparatus for enabling a user to control a function of the processor-controlled machine by spoken commands, the control apparatus comprising:

receiving means for receiving from the speech processing apparatus instructions derived from speech recognised by the speech processing apparatus; and

dialog communication means for communicating with the user to provide information to the user in response to instructions received from the speech processing apparatus

thereby enabling a dialog with the user, wherein the dialog communication means has a number of different dialog states and is arranged to change dialog state in response to received instructions, the control apparatus being arranged to supply to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state of the dialog communication means such that, in at least one dialog state, the control apparatus is arranged to provide instructions to cause first and second grammars to be ~~linked by~~ combined, based on an interface grammar having defining an interface of grammar rules usable by and not including the content of the grammar rules, the first grammar being arranged to include the interface of the grammar rules defined by the interface grammar and implementable by the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar, so as to form an extended grammar.

15. (Original) A control apparatus according to claim 13, wherein the control apparatus comprises a JAVA virtual machine.

16. (Currently Amended) A device couplable to a network, the device comprising a control apparatus in accordance with ~~the~~ claim 13 and a processor-controlled machine.

17. (Original) A device according to claim 16, wherein the processor-controlled machine is arranged to carry out at least one function.

18. (Currently Amended) A device according to claim 17, wherein the processor-controlled machine is selected from the group consisting of:

a photocopier, a facsimile machine, a multi-function machine, a television, a video cassette recorder, a microwave oven, a heating system, and a lighting system.

19. (Original) A device according to claim 16, wherein the processor-controlled machine is arranged to cause another device coupled to the network to carry out the at least one function.

20. (Currently Amended) An assembly comprising a device in accordance with claim 19 and, as said other device, a device comprising a ~~processor-controlled~~ processor-controlled machine and a control device.

21. (Original) An assembly according to claim 20, wherein the device comprises a digital camera and said other device comprises a printer.

22-26. (Canceled)

27. (Currently Amended) In a system comprising:
at least one device having a processor-controlled machine for causing at least one function specified by a user to be carried out and a control apparatus for enabling voice-control of the processor-controlled machine and a speech processing apparatus having means for receiving speech data representing speech by a user, a grammar store storing speech recognition

grammars, speech recognition means for recognising speech in the received speech data using at least one of the speech recognition grammars, speech interpreting means for interpreting the recognised speech to provide instructions for controlling at least one function of a processor-controlled machine and transmitting means for transmitting the instructions to the control apparatus, a method of operating the control apparatus which comprises:

providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognising speech data to the speech processing apparatus to cause a first grammar ~~using~~ including an interface of grammar rules defined by an interface grammar, which defines the interface of grammar rules and does not include the content of the grammar rules, to be ~~linked by~~ combined, based on the interface grammar, ~~to~~ with a second grammar which ~~implements~~ specifies grammar rules according to the interface defined by the interface grammar, to form an extended grammar.

28. (Currently Amended) A method according to claim 27, which comprises:
receiving instructions derived from speech recognised by the speech recognition means;

communicating with the user to provide information to the user in response to received instructions enabling a dialog with the user with the dialog having a dialog state dependent on the received instructions; and supplying to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state such that, in at least one dialog state, the instructions cause said first and second grammars to be ~~linked by~~ combined, based on said interface grammar.

29. (Currently Amended) A method of operating a speech processing apparatus for receiving speech data representing commands spoken by a user for controlling a function of a device, the method comprising:

- receiving speech data representing speech by a user;
- accessing a grammar store comprising at least first and second grammars having grammar rules and at least one interface grammar defining an interface of grammar rules and not including the content of the grammar rules;
- causing a first grammar which ~~uses~~ include the interface of grammar rules defined by ~~an~~ the interface grammar to be ~~linked by~~ combined, based on the interface grammar, ~~[[to]]~~ with a second grammar which ~~implements~~ specifies grammar rules according to the interface defined by the interface grammar;
- recognising speech in the received speech data;
- interpreting recognised speech to provide instructions for enabling a function of a device to be controlled; and
- transmitting the instructions to a device for enabling control of a function of that device to form an extended grammar.

30. (Currently Amended) A method of operating a control apparatus for coupling a processor-controlled machine to a speech processing apparatus for enabling a user to control a function of a machine by spoken commands, which method comprises transmitting speech recognition grammar instructions defining a speech recognition grammar or grammars to be used by the speech processing apparatus means for recognising speech data including instructions for causing first and second grammars to be ~~linked by~~ combined, based on an

interface grammar ~~having~~ defining an interface of grammar rules usable by and not including the content of the grammar rules, so as to form an extended grammar, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and implementable by the second grammar being arranged to specify grammar rules according to the interface defined by the interface grammar so as to form an extended grammar.

31. (Currently Amended) A method of operating a control apparatus for enabling coupling of a processor-controlled machine to a speech processing apparatus remote from the processor-controlled machine for enabling a user to control a function of the processor-controlled machine by spoken commands, the method comprising:

receiving from the speech processing apparatus instructions derived from speech recognised by the speech processing apparatus;

communicating with the user to provide information to the user in response to instructions received from the speech processing apparatus using a dialog which has a number of different dialog states dependent upon the received instructions; and

supplying to the speech processing apparatus instructions regarding the speech recognition grammar or grammars to be used in dependence upon the dialog state of the dialog communication means such that, in at least one dialog state, the instructions cause first and second grammars to be ~~linked by~~ combined, based on an interface grammar ~~having~~ defining an interface of grammar rules usable by and not including the content of the grammar rules, so as to form an extended grammar, the first grammar being arranged to include the interface of grammar rules defined by the interface grammar and implementable by the second grammar being

arranged to specify grammar rules according to the interface defined by the interface grammar so
as to form an extended grammar.

32-37. (Canceled)

38. (Currently Amended) A system comprising:

a processor-controlled machine for causing at least one function specified by a user to be carried out;

a control apparatus for enabling voice-control of the processor-controlled machine;

an audio input device for receiving speech from a user and for supplying speech data representing the received speech; and

a speech processing apparatus having means for receiving speech data from the audio input device, a grammar store storing speech recognition grammars, speech recognition means for recognising speech in the received speech data using at least one of the speech recognition grammars, speech interpreting means for interpreting the recognised speech to provide instructions for controlling at least one function of a processor-controlled machine and transmitting means for transmitting the instructions to the control apparatus,

the control apparatus being arranged to couple the processor-controlled machine to the speech processing apparatus and having means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognising speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the grammar store comprises at least

first and second grammars having grammar rules and at least one interface grammar defining an interface of grammar rules and not including the content of the grammar rules, the first grammar being arranged to ~~use~~ include the interface of grammar rules defined by the interface grammar and the second grammar being arranged to ~~implement~~ specify grammar rules according to the interface defined by the interface grammar, and wherein the speech recognition grammar instructions providing means is arranged to provide instructions for causing the second grammar to be ~~linked to~~ combined with the first grammar ~~using~~ based on the interface grammar.

39. (New) A system comprising:

at least one device having a processor-controlled machine for causing at least one function specified by a user to be carried out and a control apparatus for enabling voice-control of the processor-controlled machine and a speech processing apparatus having means for receiving speech data representing speech by a user, a grammar store storing speech recognition grammars, speech recognition means for recognising speech in the received speech data using at least one of the speech recognition grammars, speech interpreting means for interpreting the recognised speech to provide instructions for controlling at least one function of a processor-controlled machine and transmitting means for transmitting the instructions to the control apparatus,

the control apparatus being arranged to couple the processor-controlled machine to the speech processing apparatus and having means for providing speech recognition grammar instructions regarding the speech recognition grammar to be used by the speech recognition means for recognising speech data and means for transmitting speech recognition grammar instructions to the speech processing apparatus, wherein the grammar store comprises at least

first and second grammars each having specific grammar rules and at least one interface grammar defining an interface of grammar rules but not including the specific rules of the first and second grammars, the first grammar including an instruction to import the interface grammar, and the second grammar associating an interface rule with specific rules of the second grammar, and wherein the speech recognition grammar instructions providing means is arranged to provide instructions for causing the second grammar to be combined with the first grammar by the first grammar importing the interface grammar and the second grammar implementing the specific rules of the second grammar associated in the second grammar with the interface rule.